

The First Intervention Study in Elder Self-Neglect: A Randomized Clinical Trial to Improve Vitamin D Levels

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Background: Despite high mortality rates, elder self-neglect is characterized by refusal of medical and social interventions. To date there have been no tested clinical interventions in elders who self-neglect. Previous research from the TEAM Institute has shown significantly low vitamin D levels in this population. This study aimed to determine the feasibility of a clinical intervention. Replacement of vitamin D was chosen because of its ease of administration and favorable safety profile. **Methods:** A randomized clinical trial using directly observed therapy of vitamin D was conducted using 50 elders, ≥ 65 years of age, with Adult Protective Services (APS) validated self-neglect. A staggered intervention with waiting controls was used to maximize statistical power. One-third ($n=17$) of the group was administered 50,000 IU vitamin D₂ (ergocalciferol) monthly and the remainder ($n=33$) were administered 400 IU monthly. Serum 25-OH vitamin D was assessed at baseline and 5-months. **Results:** 69% agreed to participate in the study and of those $n=40$ (80%) remained at 5-months. At baseline, 12% ($n=7$) were deficient in vitamin D ($<30\text{nmol/L}$) and approximately 38% ($n=22$) had inadequate vitamin D levels ($<50\text{nmol/L}$). The baseline 25-OH vitamin D level was $59\text{ nmol/L} \pm 25$ (mean \pm SD), and increased significantly to $72\text{nmol/L} \pm 21\text{ nmol/L}$ at 5-months. **Conclusion:** These data are the first to provide evidence that clinical interventions are feasible in elders who self-neglect. The increase in vitamin D levels confirmed that the study personnel were able to successfully intervene community-dwelling elders with self-neglect. This study sets the precedent for future intervention and prevention studies.